

A NEW SPECIES OF THE BLIND FISH *HORAGLANIS* MENON
(SILUROIDEA: CLARIIDAE) FROM PARAPPUKARA (TRICHUR DISTRICT) AND
A NEW REPORT OF *HORAGLANIS KRISHNAI* MENON
FROM ETTUMANUR (KOTTAYAM DISTRICT), KERALA¹

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Horaglanis alikunhii – a new species of blind fish of Family Clariidae (Siluroidea) is described from Trichur district, Kerala. *Horaglanis krishnai* Menon is newly reported from Ettumanur, Kottayam district, Kerala.

Key words: *Horaglanis alikunhii* sp. nov., blind fish, *Horaglanis krishnai*, new record, endemism

INTRODUCTION

The genus *Horaglanis* was created by Menon (1950) to include a siluroid fish obtained from a well at Kottayam, Kerala. The unique character of this fish was the complete absence of eyes. This was the first report of a totally blind fish from India. On May 15, 2000 we obtained a blind fish at a depth of 8.5 m, while digging a new well in the void laterite soil of Parappukara (10° 23' N, 76° 15' E), Trichur district, Kerala. The fish was collected live from a narrow crevice on the sidewall of the well through which water was flowing out. The live fish was translucent with visible blood capillaries, so that the fish appeared a beautiful red. It was kept alive in an aquarium along with some other fish until September 22, and subsequently preserved in 8% formaline for further study. On April 1, 2001 we collected another blind fish from a well at Ettumanur (Kottayam district) while pumping out water.

The morphology of both the fishes was studied in detail under a stereomicroscope without dissecting them. The specimen obtained from Ettumanur was easily identified as *Horaglanis krishnai* Menon by comparing it with the original description by Menon (1950), and with those of Jayaram (1981) and Talwar and Jhingran (1991). However, the specimen collected from Parappukara was found to be distinct and is described here as a new species of *Horaglanis* Menon.

Horaglanis alikunhii sp. nov. (Fig. 1)

Description: Body elongate, eel-like, total length 3.2 cm, its maximum height just behind the head. Head with four pairs of barbels characteristic of Family Clariidae; eyes completely absent. Gill membranes united at the anterior end

near the lower jaw. Dorsal fin long, with 24 rays arising in advance of the origin of pelvic fins; anal fin with 17 rays originating far behind the origin of pelvics; both dorsal and anal fins terminating at base of caudal fin. Pectoral fins minute, highly vestigial, leaf-like, with rounded margin, supported by short central axis and 9 rays; pelvic fins long, conspicuous, supported by 6 rays, 2nd ray distally branched. Caudal fin large with pointed tip, supported by 30 rays, middle 10 rays branched at their ends.

Holotype: The specimen is deposited with the Zoological Survey of India, Calicut. Regn. Code: ZSI (WGRS) CLT. No. V/F 13137.

Etymology: The species is named after the distinguished aquaculturist Dr. K.H. Alikunhi in appreciation of his contribution to fishery science in general and Indian fisheries in particular.

Relationship: *Uegitglanis* Gianferrari and *Horaglanis* Menon are the only known genera of Family Clariidae in which the eyes are absent. Both these genera are similar in the elongated shape of the body, disposition of dorsal and anal fins terminating at the base of the caudal and in the complete absence of eyes. However, *Horaglanis* is distinguished from *Uegitglanis* in having relatively shorter dorsal and anal fins, vestigial pectoral fins without spines and gill membranes united with the isthmus. A comparison of the specimens obtained by Menon (1950) from Kottayam, and the present specimens collected from Ettumanur and Parappukara is given in Table 1. Although the Ettumanur specimen is very similar to the one from Kottayam, the specimen from Parappukara, namely *H. alikunhii* differs as shown in Table 1.

Ecological Notes: Both, *Uegitglanis zammaroni* Gianferrari 1923 obtained from Italy (Teugels 1996) and *Horaglanis krishnai* Menon 1950 from Kerala are considered

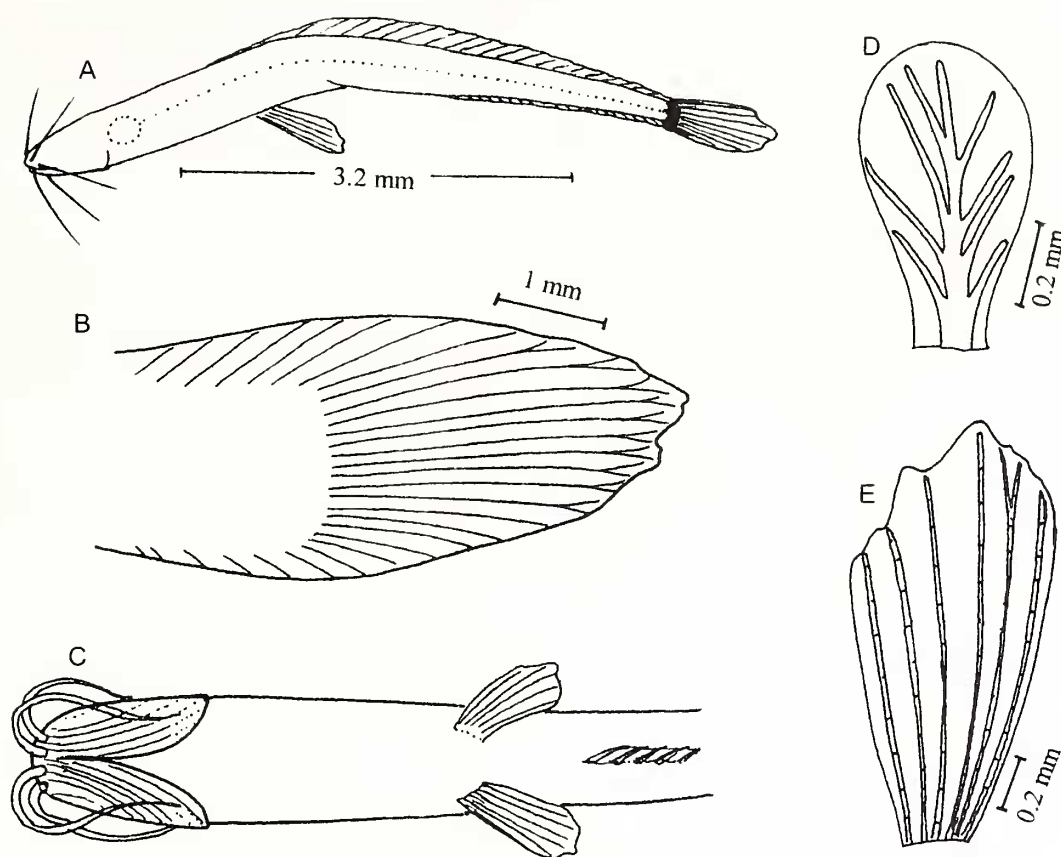


Fig. 1: *Horaglanis alikunhii* sp. nov., A. Lateral view; B. Caudal fin; C. Ventral view (anterior half only); D. Pectoral fin; E. Pelvic fin

Table 1: Comparison of characters of *Horaglanis alikunhii* with *H. krishnai*

Characters	<i>H. krishnai</i> Kottayam	<i>H. krishnai</i> Ettumanur	<i>H. alikunhii</i> Parappukara
Total length	38.85 mm	39.00 mm	32.00 mm
Length of head	6mm	5.5 mm	6mm
Width of head	5.8mm	4.5 mm	3.5mm
Length/Width ratio of head	1.035	1.22	1.71
Shape of head	Globular	Globular	Elongated
Number of dorsal fin rays	23	23	24
No. of anal fin rays	17	17	17
Pectoral fins	Vestigial	Vestigial	Highly vestigial
Pelvic fins	Normal	Normal	Long, well developed
Caudal fin shape	Margin rounded	Margin rounded	Pointed tip
Caudal fin rays	24	24	30
Colouration	Yellowish-white (preserved)	Red when alive	Red when alive
Habitat	Well	Well	Subterranean channel

cave-restricted blind species, although they are found to occur in wells. It is noteworthy that *Horaglanis alikunhii* from Parappukara was collected live from a narrow crevice on the sidewall of a well through which water was flowing. This indicates its subterranean habit and that it might have reached the site through interconnected cavities in lateritic rocks. The presence of a hypogean fish population in these channels shows the existence of a unique ecosystem. The red colour of the live fish due to the abundance of erythrocytes in the superficial blood capillaries is probably an adaptation in oxygen-deficient waters in this habitat.

Endemism: The first report of *Horaglanis krishnai* was from a well at Kottayam (locality not mentioned) in 1950. Subsequent reports of this species by Mercy *et al.* (1982) and Mercy *et al.* (1984) are also from wells at Kottayam. The locality at Ettumanur from where the collection was made is only about 12 km from Kottayam town. As *H. krishnai* is known only from Kottayam district, it can be considered endemic to this region. Because of its endemic distribution, scarcity of available specimens and the unique habitat subject to destruction, *H. krishnai* is included in the Red List of threatened animals by IUCN (1990).

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